

SUPERSEDING  
MIL-W-22759/9A  
29 June 1973  
See also "Supersession  
Data" on Page 3

MILITARY SPECIFICATION SHEET

WIRE, ELECTRIC, FLUOROPOLYMER-INSULATED, EXTRUDED TFE,  
SILVER-COATED STRANDED COPPER CONDUCTOR, 1000-VOLT

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the wire described herein shall consist of this document and the issue in effect of Specification MIL-W-22759.

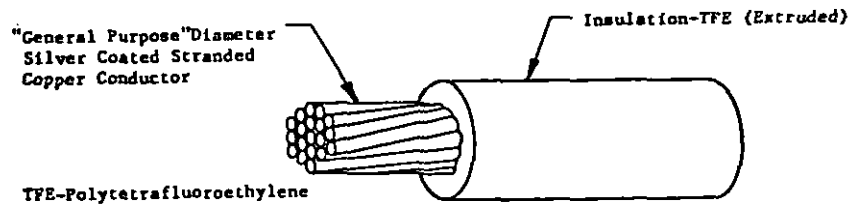


TABLE I. CONSTRUCTION DETAILS

Part No. 1/	Wire size	Stranding (Number of strands X AWG gauge of strands)	Diameter of stranded conductor (inches)		Finished wire		
			(min)	(max)	Resistance at 20°C (68°F) (ohms/1000 ft) (max)	Diameter (inches)	Weight (lbs/1000 ft) (max)
M22759/9-28-*	28	7 X 36	.014	.015	63.8	.043 ±.002	1.90
M22759/9-26-*	26	19 X 38	.018	.020	38.4	.048 ±.002	2.57
M22759/9-24-*	24	19 X 36	.023	.025	24.3	.053 ±.002	3.33
M22759/9-22-*	22	19 X 34	.029	.032	15.1	.060 ±.002	4.60
M22759/9-20-*	20	19 X 32	.037	.040	9.19	.068 ±.002	6.40
M22759/9-18-*	18	19 X 30	.046	.050	5.79	.078 ±.002	9.10
M22759/9-16-*	16	19 X 29	.052	.057	4.52	.085 ±.002	11.0
M22759/9-14-*	14	19 X 27	.065	.072	2.88	.100 ±.003	16.4
M22759/9-12-*	12	(B) 19 X 25	(B) .082	(B) .090	(B) 1.81	.120 ±.004	(B) 25.3
M22759/9-10-*	10	37 X 26	.106	.112	1.19	.141 ±.004	38.2
M22759/9-8-*	8	133 X 29	.158	.169	.658	.207 ±.005	68.8

1/ PART NO.: The asterisks in the part number column, Tables I through III, shall be replaced by color code designators in accordance with MIL-STD-681. Examples: Size 20, white - M22759/9-20-9; white with orange stripe - M22759/9-20-93.

(B) denotes changes

TABLE II. PERFORMANCE DETAILS

Part No.	Abrasion resistance (Procedure 11)				Bend testing			
	Resistance (inches of tape) (min) (initial condition)	Weight support bracket	Weight (lbs)	Tension load (lbs)	Mandrel diameter (inches) (+.3X)		Test load (lbs) (+3Z)	
					Life cycle (oven & bend tests) 1/	Cold bend test	Life cycle (oven & bend tests) 1/	Cold bend test
M22759/9-28-*	24	A	.50	1.0	.125	.250	.50	
M22759/9-26-*	24	A	.50	1.0	.125	.250	.50	
M22759/9-24-*	30	A	.50	1.0	.125	.250	.50	
M22759/9-22-*	30	A	.50	1.0	.250	.375	.75	
M22759/9-20-*	30	A	.50	1.0	.250	.375	.75	
M22759/9-18-*	36	B	.75	1.0	.250	.375	1.00	
M22759/9-16-*	36	B	.75	2.0	.375	.500	1.00	
M22759/9-14-*	36	B	1.25	2.0	.500	.750	2.00	
M22759/9-12-*	36	B	1.25	2.0	.500	.750	2.00	
M22759/9-10-*	48	B	1.25	2.0	.750	1.00	3.00	
M22759/9-8-*	48	C	2.00	2.0	.750	1.00	3.00	

1/ Also for bend tests after immersion.

ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C (392°F) max conductor temperature

VOLTAGE RATING: 1000 volts (rms) at sea level

SPARK TEST OF PRIMARY INSULATION: Not required

IMPULSE DIELECTRIC TEST: 9.5 kilovolts (peak), 100% test

INSULATION RESISTANCE: 50,000 megohms for 1000 ft (min)

WRAP TEST: "Wrap back" test required, no cracking

Oven temperature, 313 ± 2°C (595.4 ± 3.6°F)

BLOCKING: 260 ± 2°C (500 ± 3.6°F)

SHRINKAGE: 0.03 inch max at 290 ± 2°C (554 ± 3.6°F)

WICKING: No requirement

LOW TEMPERATURE (COLD BEND):

Bend temperature: -65 ± 2°C (-85 ± 3.6°F)

Dielectric test, 3000 volts (rms), 60Hz

THERMAL SHOCK: Oven temperature 200 ± 2°C (392 ± 3.6°F)

Max change in measurement Sizes 28 through 12: 0.060 inch  
Sizes 10 through 8: 0.100 inch

FLAMMABILITY: Post-flame dielectric test not required

LIFE CYCLE: Oven temperature 275 ± 2°C (527 ± 3.6°F)

Dielectric test, 3000 volts (rms), 60Hz

DIELECTRIC TEST AFTER IMMERSION: 3000 volts (rms), 60Hz

ABRASION RESISTANCE AFTER IMMERSION: No requirement

HUMIDITY RESISTANCE: No requirement

SURFACE RESISTANCE: 500 megohm-inches (min) initial and final readings

SMOKE: 290°C (554°F)

ACID RESISTANCE: Required

Dielectric test, 3000 volts (rms), 60Hz

COLOR: In accordance with MIL-STD-104, Class 1; white preferred

COLOR STRIPING OR BANDING DURABILITY: 250 cycles (500 strokes) (min), 500 grams weight

IDENTIFICATION DURABILITY: 125 cycles (250 strokes) (min), 500 grams weight

WIRE LENGTH REQUIREMENTS: Schedule A

**SUPERSESSSION DATA:** The wire of this specification sheet, by part number, replaces and supersedes the wire of MS18113(AS) (canceled) in accordance with Table III.

TABLE III. SUPERSESSSION BY PART NUMBER

Part number MS18113(AS)	Part number MIL-W-22759/9
MS18113-28-*	M22759/9-28-*
MS18113-26-*	M22759/9-26-*
MS18113-24-*	M22759/9-24-*
MS18113-22-*	M22759/9-22-*
MS18113-20-*	M22759/9-20-*
MS18113-18-*	M22759/9-18-*
MS18113-16-*	M22759/9-16-*
MS18113-14-*	M22759/9-14-*
MS18113-12-*	M22759/9-12-*
MS18113-10-*	M22759/9-10-*
MS18113-8-*	M22759/9-8-*

**Custodians:**

Navy - AS  
 Army - EL  
 Air Force - 80

**Preparing activity:**

Navy - AS  
 (Project No. 6145-0670-7)

**Review activities:**

Navy - EC, OS  
 Army - ME, MI, MU  
 Air Force -  
 DSA - IS  
 NSA

**User activities:**

Navy - MC  
 Army - AT, AV  
 Air Force - 11

Review/user information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current Federal Supply Classification Listing of DOD Standardization Documents.



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